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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,336	01/25/2005	Keiji Umeda	265095US2XPCT	8805

22850 7590 11/23/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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HAMIDINIA, SHAWN A

ART UNIT	PAPER NUMBER
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1653

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/522,336	UMEDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shawn Hamidinia	1653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. This application is a 371 of PCT/JP03/09449 filed on January 25, 2005, and claims benefit of Japanese application 2002-215944 filed on July 25, 2002. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

2. Claims 4-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must be phrased in the alternative. See MPEP § 608.01(n). Accordingly, the claims 4-9 have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Step (2) of claim 1 refers to itself, appropriate correction is required.

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Claim 1 is also rejected under 35 U.S.C. 112, second paragraph, because the applicant uses the word "desulfurization", which is improper because the alkali conditions will break disulphide bonds not cause "desulfurization".

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by a water-soluble keratin derivative taught by Kuniomi et al. (1990), Homonoff et al. (2001), and Yoshioka et al. (1981).

6. Any one of these references teach a water-soluble keratin protein, and since applicant has no discussion about changes in the actual structure of the water-soluble keratin upon UV-C treatment, any teachings of a water-soluble keratin protein will serve as prior art. Kuniomi et al. teach that a water-soluble keratin protein can be prepared from keratin by immersing wool, feather, etc., in an alkaline solution to cleave disulfide bonds in keratin, see abstract. The alkali concentration they indicate is from 0.1-4.0 wt. % of total weight. This clearly anticipates claim 3 because the alkali concentration claimed is 1.1-2.0 wt % of total weight.

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7. Homonoff et al. teach a water-soluble keratin protein from poultry feathers made when keratin is subjected to an alkali treatment, see **0007**. Homonoff et al. further teach that the keratin protein may undergo a pre-treatment step by UV treatment, see **0019**. Homonoff et al. also teach that filtering the slurry can be employed to separate the keratin protein, see **0026**. Taken together, Homonoff et al. teach the process of obtaining the water-soluble keratin by alkaline conditions, UV treatment, and filtration. Therefore claims 1-9 are anticipated under 35 U.S.C. 102(b).

8. Yoshioka et al. teach water-soluble keratin from feathers prepared from an aqueous solution adjusted to alkaline conditions, see line 35-59, column 3. Yoshioka et al. further teach that the water-soluble keratin has an average molecular weight of 2 to 20 kDa, see line 54-57, column 1; lines 20-28, column 4. Yoshioka et al. further teach that when the keratin hydrolyzate is more than 20 kDa, the hydrolyzate is water-insoluble. This clearly anticipates claim 2 because the molecular weight of the water-soluble keratin derivative is 5 to 50 kDa.

### ***Conclusion***

9. No claim is allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Hamidinia whose telephone number is (571)

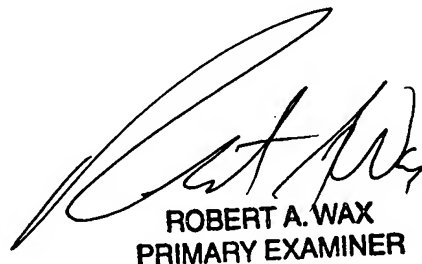
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272-4534. The examiner can normally be reached on Mon-Fri from 9:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAH



ROBERT A. WAX  
PRIMARY EXAMINER